THE VETERINARY RECORD

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Compensation for Glanders.

A correspondent asked last week "Why compensation should be paid for the compulsory slaughter of Glandered horses any more than for the destruction of rabid dogs"? The question supposes that the two classes of animals are equally dangerous and equally useless. A rabid dog is very likely to fatally injure human beings; a glandered horse is unlikely to. A rabid dog never lives more than eight days; a glandered horse may live and work for eight years. These statements show that there is no analogy between the two diseases and that the best methods of stamping-out cannot be framed upon similar lines for both.

The only two diseases that have been certainly stamped-out in this country are cattle-plague and foot-and-mouth disease. Both succumbed to the regulations carried out by local authorities, controlled and assisted by the Central Department in London. Probably pleuro-pneumonia will not be long in assuming the character of an extinct plague in these islands, and swine fever shows unmistakeable evidence of being vanquished in the near future. Considerable variety is to be found in the rules under which success was attained with these diseases, but in no case has compulsory slaughter been carried out either by Central or local authority without payment of liberal compensation to the owner. The law provides that payment shall accompany slaughter as follows:—

In Cattle Plague.

Half value for a diseased animal.
Full value for an in-contact animal.

In Pleuro-Pneumonia.

Three-fourths value for a diseased animal.
Full value for in-contact animal.

In Foot-and-Mouth Disease.

Full value of the animal.

In Swine Fever.

One-half value of diseased animal.

Compensation was conjoined with compulsory slaughter for suppressing cattle-plague in 1865, and from that time has remained an accepted part of all sanitary regulations requiring the slaughter of animals which might possess a value to the owner either during life or after death. Rabies and anthrax are the only two diseases in the Animals Diseases Act for which compensation need not be paid when compulsory slaughter is permitted. Both diseases are incurable, both are dangerous to man, and infected animals are useless to their owners.

No man of any experience would class glanders with rabies and anthrax as diseases requiring the same methods of control. For stamping-out purposes analogous measures in glanders and pleuro-pneumonia would be more reasonable, but even here there is no common ground for comparison.

The principle which has been adopted by the legislation is, in short, to compel the slaughter of all animals suffering from certain serious diseases, and to require payment of compensation for those which might be of use or value to their owners.

Down to 1892 this principle was strictly adhered to. Provision was made for the slaughter of glandered horses by permission of the owner or, when seized in public places, by order of the local authority. No compensation was offered or demanded. The definition of "a glandered horse" was, at that time, only what we now describe as "a fully developed case"—a dangerous animal which the owner had no desire to keep. There were other diseased horses which were described as "suspicious" or as suffering from "farcy." They were not killed. The law required that they should be isolated so long as any signs of disease existed, but recognised that a large proportion of them might resume work and be of great value to their owners.

It had often been pointed out by veterinary surgeons that this course was insufficient to control the spread of glanders, and that to suppress the disease it was necessary to destroy every horse visibly suffering from glanders. Nothing was done for some years.

In 1892 four or five human beings lost their lives in London by infection from glandered horses. The daily press sounded an alarm. The Board of Agriculture had just obtained a new President who possessed the attributes of the proverbial new broom. The County Council was also a brand new body anxious to exhibit its zealous care for the wants of its electors. The psychological moment existed, and everybody assisted to produce the Glanders Order of 1892, which was heralded with a flourish of trumpets. The Order was a logical document. It provided that all glandered horses should be slaughtered, whether the symptoms of the disease were in the nose or on the legs, whether it was called "glanders" or "farcy" or even "suspicious." It provided also that any slaughtered horse should be paid for, and the compensation was fixed at half the value of the horse prior to attack; no horse to be valued at more than £40. The provision of compensation for every diseased horse, including the fully developed cases which had hitherto been destroyed as useless, was doubtless adopted because of the difficulty of separating into classes those deserving of compensation and those not. Practical expediency took the place of logical principle, and some animals were included for compensation that there might be no failure of justice to those which might have done their master's work for years or months. The 1892 Order was a

good one, but it was strangled by the local authority in whose district nearly 90 per cent. of the disease existed. The Public Control Committee of the London County Council, by a majority of *two*, declined to put the Order in force. In self-protection every county round London was obliged to do the same, or they would have been flooded by diseased animals from the Metropolitan hot-bed of infection.

For two years only the regulations as to isolation, disinfection, and slaughter by permission of the owner, were enforced, but during the interregnum—thanks to the horse-owners and their veterinary advisers—the disease slightly but steadily decreased. The Local Authority did nothing but register deaths of deceased animals. The decrease of disease depended solely upon private effort. Then the horse-owners protested to the London County Council and to the Board of Agriculture, with the result that a new Order was issued—an Order representing a compromise between the Board of Agriculture and the County Council. The new Order is now in force and is known as the Glanders Order of 1894. It left optional to the Local Authorities the slaughter of diseased horses, and it reduced the compensation from half-value to one-fourth. It also introduced a power which was entirely novel—which is opposed to the principle of the Animals Diseases Act, and which has been condemned by a Judge of the High Court of Justice. This clause introduces a sliding scale of compensation, not dependent upon the value of the animal but upon the will or whim of the Local Authorities. It provides for payment of one-fourth the value of a horse, but it permits a minimum of £2 for each animal compulsorily slaughtered. A 100 guinea horse may be killed and paid for at the same rate as a 40s. knacker. Only once has the provision been before a judge, and then the opinion expressed was that it was unfair, and that each horse should be valued on its merits. Justice Charles disagreed with the view adopted by Mr. Herbert Gardner, but the unjust provision still remains in the Order.

From this it will be seen that compensation for glandered horses is in accordance with the principle of the Animals Diseases Act, and has law and precedent for its support.

Now what can be said for it as a regulation facilitating the end aimed at by legislation against glanders—viz., the saving of human life and the protection of property? What can be said for it as a practical sanitary measure? The object of the law is to rid the country of glanders. The law has no effect until the disease is detected, and no provision exists for detection except the notification by the owner. Until disease is notified the law takes no action. When disease is notified, the authorities can step in and act. Horse-owners of course notify all cases of disease which they have determined are useless, and which they desire to have killed and removed. But there are many slight cases—horses with an enlarged gland, or it may be a couple of farcy buds. These symptoms are easily removed and the horse may resume work or be sold. What is the natural tendency of a poor man owning a horse worth £40 if he is only paid £2 for slaughtering it? Why, to refrain from notification and it wait until the symptoms of disease have passed away.

On the other hand, when fair compensation is offered the inducement is to incur no further trouble and risk, but to have the horse slaughtered. This is no hypothesis. It is a hard fact, known to everyone whose experience includes the practical carrying out of the Diseases of Animals Act. It has been often acknowledged by the Veterinary Department of the Government that liberal compensation is the strongest inducement to notification and a most economical means for successful suppression of disease. Prosecutions for negligence are useful, but they can not take the place of inducements to co-operation. Unless the owner co-operates no success has ever attended the suppression of animal diseases.

There is still one more argument in favour of fair compensation to horse-owners for the compulsory destruction of their horses. It is economical. Existing regulations are valuable only in checking the movement of diseased horses in public places. They do not suppress disease at all. The decrease of glanders occurring in some years is solely due to the action of the horse-owners and their veterinary advisers. Every year the ratepayers are put to expenses which will continue chargeable under existing rules, but which might be entirely saved by a bold and well organised effort sustained for a few years. In other words the annual charge to the ratepayers might be dispensed with by a liberal effort, but will remain more or less constant under the evasive and half-hearted measures permitted by the Order of 1894.

Since mallein has been adopted as a reliable means of diagnosis, it is more than ever necessary to offer a liberal compensation for diseased horses. By mallein cases can be detected which present no clinical signs of disease, and in a few days the reaction of mallein has passed away and sale of the horse is simple. Thus disease is spread more insidiously and more widely than before. This condition of affairs can only be met by making it worth the while of owners to use mallein openly and to abide by the action of the authorities, whether that be slaughter or isolation.

The London County Council pay for all diseased horses a sum of £2. In this way they obtain the carcases of most of the glandered horses in London—not all. They have recently taken a very happy step further by paying for all horses (showing no signs of disease except the reaction of mallein) one-fourth the value of each animal, but no payment to exceed £5 for one horse. This is a step in the right direction, and if the limit were made £10 it would be a step having great influence in the suppression of the disease. It would induce owners to use mallein thoroughly and to clear their studs honestly. Still more good would it do, and still more economical would it prove if one-third of the value were paid instead of one-fourth.

To labour the argument further would be like thrashing a dead horse, for there are no horseowners of experience who do not believe in compensation, no officials at the Board of Agriculture, and only three members of the veterinary profession.

W. Hunting.

CASES AND ARTICLES.

FRACTURED RIBS WITH PERFORATION OF THORAX IN A COW.

By J. H. Parker, M.R.C.V.S., Mill House, Faringdon.

A seven-year-old shorthorn cow, due to calve on October 23rd, strayed during the night on to the Great Western Railway line near Uffington Station. She was found in the morning with a wound on her right side, and brought home. Shortly afterwards she gave birth to two healthy calves. I saw her about ten o'clock and found a large triangular wound between the 10th and 11th ribs, through which air was rushing in and out, synchronous with the respirations. The last three ribs were fractured and there was considerable flattening of that side. The cowman said that before the cow calved there was not any air rushing in and out of the wound, as he said it seemed to be filled up with what he called "chitlings" which disappeared upon the birth of the calves, and allowed the ingress and egress of air.

Treatment.—Not having anything special we sutured the wound as close as possible, and extemporised a pad made of flour and water on a piece of linen, adding a little chinosol to the water, this was placed over the wound and held in position by a bed sheet stitched as firmly as possible round the cow. Her temperature registered 104° for a fortnight, she grunted a good deal and was very much disinclined to move. I saw her on Nov. 11th when we removed the coverings. The wound had healed perfectly, and with the exception of the flattening of the side she seemed as well as ever. The point of interest to me is why should a cow recover from such an injury which would undoubtedly have proved fatal in a horse?

DISPENSING—DRUGS IN SOLUTION.

In a busy practice dispensing is commonly regarded as a nuisance, and the wholesale druggist, aware of the fact, caters for our convenience in a variety of ways; the simple time-saving method of keeping in solution such things as mag. sulph., pot. nit., pot. bicarb., sodæ bicarb., etc., so generally in vogue with medical men who dispense their own medicines, might be copied with more advantage than some other things in which we ape them.

A memorandum on the back of the bottle may be so written that a "locum" suddenly called in can decipher its meaning without advertising the contents to the idly curious who loiter in the pharmacy when opportunity affords.

Time is saved when a night case calls for dispensing, and we wish to handle as few icy-cold bottles as possible and get back to bed, (only to forget our good resolutions to have these things ready another time).

Table of Solubility for Dispensing.

Mag. Sulph.	1 in	2	of Aqua.
Pot. Bicarb.	1 in	4	,,
Sodii. Bicarb.	1 in	16	,,
Pot. Nit.	1 in	4	,,
Sodii. Sulph.	1 in	4	,,
Ammon. Carb.	1 in	6	,,
Pot. Bromid.	1 in	4	,,

The adoption of a permanent colour for each of these solutions has advantages which need not be named, but ammonia discharges vegetable colours.

Tinctures.

Pure spirit of wine being very expensive, and the methylated article objectionable, it is permissible to call attention to methods by which economy may be effected.

Presuming that a tincture is not prescribed in part as an alcoholic stimulant, aqueous preparations answer equally well. Instead of employing proof spirit to make tinctures, concentrated infusions can be prepared in leisure moments and will keep indefinitely if 10 per cent. of rectified spirit is added. Tinct. gent. co. may be cited as an example where "economy with efficiency" can be effected. It is not to be supposed that our patients are benefitted by an infinitessimally small dose of bitter orange peel or cardamum seeds, we want the active principle of the gentian, and have it at hand in the extract at 1s. 6d. per pound. It is easily rubbed down with hot water, and if not needed for immediate use, spirit can be added in the proportion before mentioned. With a drug list and the pharmacopœia before him the dispenser will be able to make a few calculations which will come as a revelation to many.

Veterinary Counter Practice.

ABSTRACTS FROM FOREIGN JOURNALS.

Rickets or Snuffles of the Pig.

(*Continued from page 280.*)

M. Leclainche (5) only just mentions it in his article on rachitismus. M. Petit exhibited a pig's head affected with the disease, which is now occupying our attention at the Central Society last May. These are all the French publications on "snuffling" of the pig that we have been able to lay our hands upon. We may add that M. Joly (7) has published in *La Presse Vétérinaire*, of 1890, a review of the German works on the same subject.

It seems very evident, if we have faith in the number and importance of the observations published in Germany, that it is chiefly in this European country that the disease has been observed.

Described by Haubner (8), Haubold (9), and Harms (10), the complaint was, as far back as 1878, considered by Schneider (11) as a nasal catarrh of traumatic origin.

Hartlmayer (12) says that he only observed the disease in animals of the English breed. Anacker (13) maintains that "Schnüfelkrankheit" is nothing more than a malignant nasal catarrh, that has been confounded with osteomalacia. Hering (14) is of

the opinion that it is a cachexia allied to scurvy. Friedberger and Fröhner (15) write that under the picturesque name of "snuffling disease," some have described, in the pig, a proteiform affection which sometimes seems to be rheumatism, at other times a chronic hæmorrhagic or purulent nasal catarrh, and finally sometimes tuberculosis or actinomycosis.

Only a few years ago, Imminger (16) published a new study in which he claims the name of Schnüfelkrankheit for a perfectly characterised disease of the pig, which he has observed in its different forms in several districts in Bavaria, and which he considers as an infectious rhinitis. Under the name of rachitism Wulff (17) describes lesions which are absolutely related to the malady in question.

The examination of the preceding various observations and opinions advanced by the different authors demonstrate how little of the nature of the snuffling disease is settled ; some are willing to look upon it as a manifestation of rachtismus, others as a simple nasal catarrh, and finally others as a specific tubercular or actinomycotic rhinitis.

As we have been fortunate enough to closely observe a pig affected with the disease we shall briefly give a *resumé* of the symptoms noticed and the lesions encountered at the autopsy of the subject. A pig, aged three and a half months, which came into the school on April 4th, 1894 ; about six weeks before, it was noticed that its head was larger than that of its fellows, and as it appeared at the same time to be less vigorous it was separated from them. After this, the head still increased in size ; it became elongated and too heavy to carry ; the pig did not get up only at the time of taking its food and then it carried its head so low that it almost touched the ground. Shortly afterwards it could not walk any longer so it had to crawl to its trough ; although liquids could nevertheless be swallowed by suction it was found impossible for it to take solid food. The respiration was difficult and noisy. At the time of its entrance into our service, the subject was very much emaciated and this made the head appear still larger. All that part which had the two superior maxillæ for its base was swollen, slimy and of a milky white appearance and very nearly hairless ; the forehead was markedly flattened in the vicinity of the superior nasals. The frontal and other bones of the cranium appeared normal. The inferior jaw was also very much swollen, its branches were widened behind and it did not come in contact with the anterior extremity of the superior jaw, from which it was separated for about 6 centimetres. The incisors, above as well as below, were well developed, the upper molars were scarcely salientand projected outwards ; the lower ones which were well up and vertical rested on the palate which was very much enlarged and bulging. Viewed in profile, the swollen palate took the form of a stem of a ship or the sole of a wooden shoe. The animal breathed with greatdifficulty as the air could scarcely pass through the nasal cavities and caused during inspiration a peculiar snuffling sound which could be heard from a distance ; expiration was carried out through the mouth. The raising of the ribs was very difficult and did not correspond with the movements of the flank. From time to time, veritable attacks of suffocation appeared, during which respiration only seemed to be carried on by the mouth ; the circulation was disturbed, and the skin and mucous membranes were bluish ; it was thought that the end had come, and yet in a few hours calmess had re-established itself and the skin returned to its white condition. At no time did we see any discharge from the nostrils.

The subject was fed with milk placed near it in a shallow vessel in which it could incline its head. It It was difficult to administer this by force, although it could be carried out without causing an attack of suffocation. To its milk 50 centigrammes of iodide of potassium was added every day, and inunctions with an ointment containing the same drug along the course of the bones were carried out. This treatment, which at first appeared to bring about to a certain extent diminution of the swelling, finally failed, and death supervened during the night of the 24th of April.

On post-mortem examination alterations only of the head were revealed. In fact, the muscles of the limbs, principally those of the fore ones, were contracted, hard, slightly fibrous, but this was evidently due to forced decubitus and permanent flexion of the joints, and to want of use. In the head, only the superior and inferior maxillæ appeared affected; they were very much swollen symetrically, and the tissues—muscles, tendons, connective tissue and skin—which covered them formed a resistent lardaceous layer, which was difficult to dissect and which was intimately united to the periosteum, which itself could not be raised without removing the bony tissue with it.

H. G.

(*To be continued.*)

5. Leclainche.—*Dict de méd vét.* Bouley et Reynal No. 18, p. 465.
6. Petit.—*Société Centrale*, Mai 1897.
7. Joly.—*Presse Vétérinaire*, 1890, p. 123.
8. Haubner.—*Magazin*, 1849.
9. Haubold.—*Sachs Jaresb*, 1861.
10. Harms.—*Magazin*, 1871.
11. Schneider.—*Deutsche Zeitsch für Thierheilkund*, 1878 B. iv., S. 153.
12. Hartlmayer.—*Adam's Wochenschrift*, 1878, S. 153.
13. Anacher.—*Pathol et Thérap, Speciales*, 1879, S. 515.
14. Hering.—*Pathol et Thérap, Speciales*, 1858, S. 165.
15. Friedberger et Fröhner.—*Pathol et Thérap, Speciales*, Rachit, p. 31.
16. Imminger.—*Goring's Wochensch*, 1890, S. 125.
17. Wulff, *Rachitis, bei Schweinen, Zeit, für Fleisch und Milch*, 1897, p. 179.

Prolific Pigs.

In times gone by, when fancy points were much more highly esteemed in pigs than at the present period, the breeding and suckling qualities of the brood sow were ignored to such an extent that the terms, pedigree pigs and sterile pigs, were, to a considerable extent, synonomous terms. Not so now in some herds, as Mr. Sanders Spencer, of Holywell Manor, can relate numbers of instances of sows in his herd having litters of nineteen. At last, one of his sows has broken the record with a litter of twenty-five pigs, all alive and as playful as kittens. This is an age of progress.

VETERINARY SOCIETIES.

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

Continued from p. 366.

(Tetanus: its prevention and cure, by Mr. S. Villar, read at the meeting in London on November 26th.)

DISCUSSION.

Mr. GEO. KING wrote hoping the Association would have a good discussion, and stating that out of six cases of the disease recently under his care four had recovered. He treated three with tetanic serum, and of these two died. The other three, including one of his own horses, had practically no medicine, and all recovered.

The PRESIDENT said he was sure they all felt very grateful to Mr. Villar for the labour and time he must have bestowed on his admirable and thoroughly up-to-date paper. (Hear, hear.) He invited discussion.

Mr. SIMPSON having endorsed the President's remarks with regard to the excellent and up-to-date paper they had heard, which had put the matter before them in a most intelligible way, said he feared that despite all the discoveries that had been made, tetanus was not now less common than it was 20 years ago. It was satisfactory to know science had discovered that they had not to deal with two kinds of tetanus. The old teaching was that they had unmistakeably idiopathic and traumatic tetanus, and that the former was brought about by exposure to cold, the dripping of water on the spine, etc. Such a theory as that was now altogether exploded, and they recognised that the entrance of the bacillus into an injured surface was the sole cause of the disease. Science had also demonstrated the habit etc. of the bacillus, and that it was not actually the bacillus which was the immediate cause of tetanus, but that the disease was due to the toxin which the bacillus manufactured. He thought there was some doubt among veterinary surgeons, and surgeons for that matter, as to whether the disease was actually painful. That it was painful to look upon he quite agreed, but he hardly thought the patient experienced acute pain, although a great amount of inconvenience and feeling of fatigue must undoubtedly be felt. Mr. Villar had spoken of various animals and their comparative liability to the the disease, but he had not touched upon the undoubted immunity of fowl. To either Pasteur or Koch it had occurred that the normal high temperature of the fowl was to a great extent, if not altogether, the cause of that immunity. Certainly with regard to anthrax, he thought it was almost impossible to affect a fowl by inoculation, though it had been done by reducing the bird's temperature by immersion in cold water. Did that fact open their eyes to any method of treatment? He believed he was right in saying that the tetanus bacillus could only be cultivated artificially at a very moderate temperature, and if that were so it would assist his argument. Did tetanus occur in horses in which there was a high fever resulting from very severe injuries, or were they, to some extent or altogether, immune from the attack of that disease? If so, it would follow that the temperature of a horse affected might be raised for a time, and so he might to some extent be given immunity from the disease. That was simply an idea of his own; and clearly everything depended upon whether as a fact, high temperature of the fowl rendered it immune. He thought Mr. Villar's opinion with regard to the three causes of death would be generally endorsed. He had told them a considerable time might elapse between the application of the bacillus to the injured surface and the appearance of diagnostic symptoms of tetanus—in other words, the bacillus must attain a certain age before it was able to manufacture the toxin which was the immediate cause of the disease. That being so, if it was suspected that the wound of an animal had been soiled by material containing the bacilli, it certainly occurred that the excision of the wounded part would be good treatment. The re-docking of an animal as a remedy was an idea as old as he could remember, and though the practice was based on a wrong theory—that of shock—it would not have lived so long had not good results followed. Certainly on the appearance of anything like a symptom of tetanus after docking it would be, to his mind, good treatment to re-dock, and so prevent the young bacilli who were under the pus at the end of the dock growing and manufacturing fresh toxin. He had had little experience of the anti-tetanin, and what experience he had had not impressed him favourably with its use when the disease was once established. That it might, as Mr. Villar had pointed out, be to some extent a preventive, was likely, as its administration might check the manufacture of the poison. He had only had the opportunity of trying the serum in three cases, two of which were exceptionally severe ones, the animals being down, and all three died. So long as the animals remained on their legs he never abandoned all hope of recovery. He had seen the experience of other veterinary surgeons who had been more successful in its application, more particularly those brought before them by Mr. Fraser in one of the veterinary periodicals. That gentleman said that during the 20 years and longer he had been in practice he had only had three recoveries from tetanus, and each of these had been in consequence of the application of the serum. He had it direct from Prof. McFadyean that in his belief this serum was absolutely useless in cases of tetanus, but that it was invaluable as a preventive. Veterinary surgeons practising in districts in which tetanus was well known had recently given the serum a fair test; and he knew one gentleman, whose name he was not at liberty to give, who had used the serum with the very best results. Then he would call to their minds the table published in *The Journal of Comparative Pathology*, which strongly impressed one as to the value of serum as a preventive. The remedies, beyond that, were many. For some years past he himself had had good results from the tincture of aconite, which could be easily applied by mixing from 5 to 10 drops with a little treacle and passing it inside the lips with a small piece of wood. Or the extract of belladonna could be placed on the teeth, and the animal left pretty much to itself. However, as the disease was due to a bacillus, probably the only relief they gave to an animal by the administration of those sedatives was that they relaxed the muscles to some extent—that they destroyed the poison in the system by such remedies he could hardly think. He had been struck with the success that had attended the slinging of horses in cases of tetanus, as related by the essayist. He himself had not resorted to it until the patient was fairly tired, but after what Mr. Villar had said he would try it when another case came before him.

Mr. LEPPER thanked Mr. Villar for his very excellent paper. He thought quietude very important in the treatment of tetanus. At the commencement of the disease they could often tell whether the attack was going to be acute or sub-acute. When the attack was very acute he thought no medicine or serums or anything else would be of use; but in sub-acute cases he had had very good results from the aconite treatment recommended by Mr. Simpson. He had tried many things at different times, but had been most successful with the alternate administration of doses of aconite and nitrite of amyl. If possible, he never gave medicine by force, but mixed it in the food. He always began by giving a very strong dose of aloes, generally in a ball. He had

often seen tetanus in sheep, but veterinary surgeons were not so often called in to attend them.

Mr. WRAGG offered his very sincere gratitude to Mr. Villar for his very able essay. As to the liability of horses on moss litter to contract the disease, some few years ago he had about 500 horses on moss litter, and did not think he had more cases of tetanus then than before or since. As they all knew cart horses, to which his practice was principally confined, were constantly getting wounds and scratches on their legs. It might have been a different moss litter that was employed by Mr. Wheatley's and Mr. Villar's clients. He quite concurred as to dust as a cause, and no doubt the greatest injuries were from "picking up" nails. He noticed that where they got a wound on the orbital processes of the frontal bone such cases were very subject to tetanus. There was no doubt the organism of tetanus was found in road dust as well as in cinder dust; and the other day a doctor told him of a child which succumbed, a cobweb having been applied to a cut finger and set up the disease. He quite agreed with Mr. Villar that acute cases generally succumbed in five or six days, and thought if they could get over the sixth or seventh day there was a chance of recovery. He himself had never found nitrite of amyl do a bit of good, and he had discarded it altogether as a failure. He got on very well with tincture of aconite and Calabar bean for a time, but at last that failed; and in such few cases as he had had since discarding that he had simply put a little belladonna on the horses' teeth, and left them as quiet as possible.

Mr. SLOCOCK also thanked Mr. Villar for his very excellent paper, which had done them all a great deal of good in proving that the scientists were on the right track, as to which he had lately been doubtful. In treatment he had used the serum without any good results, and from his experience, and what he had heard that day, he should not use it again as a curative. Mr. Slocock then related the curious history of a pony which he had been driving that day, which contracted tetanus after castration at two months old, and recovered without having been dosed with medicine of any sort, or even put under cover.

Mr. BARRETT said he had been very much interested in the paper, which had given him some information which he trusted would be useful. Whether tetanus was painful or not was a physiological question he was not prepared to answer, but they could not help being touched by the pathetic expression of a horse's face before death. He was inclined to say that the specific organism which produced the disease could be introduced through the skin only, and not through the mucous membrane. They might prevent tetanus in many ways, and nothing was so effectual as the thorough syringing out of the wounds with a strong antiseptic. He himself used 10 to 15 gr. to the ounce at the earliest possible moment. Another very important preventive was the proper drainage of the stable, as he showed by his own experience. Unfortunately the veterinary surgeon was not consulted at a sufficiently early period to apply preventive treatment, so that they must hope that some curative agent would be discovered. With regard to moss litter, his experience tallied with that of Mr. Wragg. As to the period of climax Mr. Villar's experience was not quite his He found that the spasms went on increasing until the 12th or 13th day—that the critical stage was not reached till then, and he was certainly not sure of recovery until the 15th or 16th day had passed. When the period of incubation was unusually short the acuteness of the attack was unusually severe, as the patient died very rapidly, just as in glanders, and in affections of man such as typhoid and small-pox. He had found cases of spontaneous recovery by no means uncommon; and there were times when they had better withhold drugs and give advice. He was very pleased and struck with Mr. Simpson's argument with regard to high temperatures, which had not occurred to him before He thought it might well be considered by scientific men whether something might not be done to raise the temperature for a sufficiently long time to destroy the bacilli. He had come there with the belief that anti-tetanic serum was useless, both as a preventive and a curative; but what he had heard had altered his views as to its preventive value. He was sure much benefit resulted from the immediate and thorough syringing of wounds, and he thought the use of antiseptics frequently neglected by veterinary surgeons.

Mr. SINGLETON said Mr. Villar's paper was a very striking demonstration of the connection between science and practice; and made some practical remarks on some of the points raised.

The PRESIDENT said he would like to have one or two practical points solved; one was, did animals suffering from tetanus after docking and re-amputation recover? He had seen several cases but did not recall a recovery in his own experience. Another question was, how long a period might elapse between docking and the appearance of tetanus? He had himself seen a case extending over 11 months, but the wound had not healed. He had had a lot more cases of tetanus since peat moss came into use—in fact he always took horses off that litter directly he saw symptoms. He very seldom used slings in his own practice; but on the other hand he remembered a two-year-old unbroken colt, that was down, and after slings were put on he recovered, so that it was no good to make assertions too definitely. The temperament of the animal had much to do with its chance of recovery, for undoubtedly a docile animal and a good feeder had a much better chance than an irritable and bad feeding horse. He thought as a rule the first symptoms of tetanus appeared when the wounds were healing. He always advocated a specially quiet and darkened box in such cases.

Mr. VILLAR, in reply, thanked the gentlemen present for the kind way in which they had listened to his paper, and those who had spoken for the interesting way in which they had they had taken up the discussion, and especially Mr. Simpson, who had opened it so lucidly. Mr. Villar then replied on the several points raised. As to whether tetanus was a painful disease or not, he knew a lad suffering from it who used almost to pray for injections of morphia to ease his sufferings; and they were aware that many of the muscles of the body were in a state of absolute cramp, so that it must be a painful disease. He thought the theory brought forward by Mr. Simpson, based on the immunity of the fowl, was very likely to be well-grounded and correct. They got febrile cases in the horse up to 106 degrees, and very likely febrile patients were not so subject to tetanus. He did not wish them to suppose re-docking was a remedy; but he did say that, when they knew the actual focus of the poison was at the end of the tail, they should remove the source of the poison at once. As to slinging, his idea was that in cases which on the first appearance looked like being very acute, after the third or fourth day a horse rather liked to be slung, as they got very tired standing. As a preventive he thought a dose of physic must be right, but that as a cure it must be wrong, because it took the animal off his appetite. The bacillus was found quite as much on cultivated lands as on roads. Whether a long interval elapsed between the wound and the appearance of the symptoms or not to his mind made no difference in the severity of the attack; but he was sorry no practical illustration on that point had been given in the discussion, his point being the period after natural infection. From his own experience, after artificial infection by the filtrated serum, they induced symptoms in about two days, but that would entirely depend on the strength of the injection.

Mr. SIMPSON had very great pleasure in moving a cordial vote of thanks to Mr. Villar for his most delightful paper, upon which one the liveliest discussions he ever remembered in that Association had taken place. That fact went to prove that when a subject was properly put before members of the Association it commended itself at once to them; and that the members were always ready to take advantage of discussive material. He was sure they would all be glad that they had done themselves the honour of including Mr. Villar among their vice-presidents. (Applause).

Mr. WRAGG endorsed Mr. Simpson's remarks, and seconded the motion.

Mr. HURNDALL supported the resolution, and offered Mr. Villar his personal thanks for so readily acceding to his request tc furnish a paper. The essay they had heard was worthy of any veterinary Association in the Kingdom, and he was glad to know that it would appear in the veterinary journals. (Applause).

The vote having been heartily passed, was acknowledged in a few words by Mr. Villar.

The meeting closed with a most cordial vote of thanks to the retiring president, moved by Mr. Walker, seconded by Mr. Slocock, and briefly replied to by Mr. Wheatley.

CENTRAL VETERINARY MEDICAL SOCIETY.

An ordinary general meeting was held on Thursday night, the 2nd instant, at the Royal College of Veterinary Surgeons, Red Lion Square, Holborn; Mr. J. A. W. Dollar, the president, occupying the chair. Others present—fellows and visitors—were: Messrs. J. A. W. Dollar (pres.), James Rowe (hon. treas.), F. C. Mahon (hon. sec.), W. F. Barrett, W. Perryman, Wm. E. Taylor, J. Macqueen, Joshua A. Nunn, A.V.D., F. Hobday, R. Porch, A. L. Butters, Alfred Prudames, Hugh Singleton, J. E. Tooth, L. Savournin, H. W. Caton, V. J. Hagmeir, F. E. Place, Matthew Clarke, A. Rogerson, F. W. Wragg, T. C. Garry, F. W. Kendall, John Baster, Hugh A. MacCormack, G. Upton, W. A. Stainton, George C. Lowe, F. Duck, A.V.D., J. R. Bruce, J. Phillips, Joseph F. Mantoi, S. Duff Gillespie, A.V.D., R. Moore, A.V.D., and T. S. Price. Visitors: Messrs. Morgan-Evans, Sidney H. Nye.

On the motion of Major J. A. Nunn, seconded by Mr. W. Reekie, the minutes of the preceding meeting were read and confirmed.

THE PROPOSED VETERINARY BENEVOLENT FUND.

Mr. F. C. MAHON, honorary secretary, read a letter from the secretary of the Midland Counties Society acknowledging the receipt of a circular with regard to the origination of a Veterinary Benevolent Fund commemorative of the Queen's long reign. The Midland Society, it was mentioned, had unanimously passed a resolution expressive of sympathy with the movement started by the Central Society, and of a desire to help forward the project "as far as its funds will allow." Further, Mr. Mahon read a communication from the secretary of the Western Counties Veterinary Medical Association intimating that the subject of the establishment of a Veterinary Benevolent Fund would be placed on the agenda paper of that Society for discussion at its next meeting.

NOMINATIONS.

The following gentlemen, members of the Royal College of Veterinary Surgeons, were duly nominated for election as fellows of the Society: Mr. Sydney Herbert Wye, 89 Bow Road, Bow, E.; Mr. C. J. Hulford, Haselmere, Surrey; and Mr. F. Garside, Clapham Common, S.W.

VARIOUS MATTERS OF PROFESSIONAL INTEREST.

By Major J. A. NUNN, D.S.O., C.I.E., A.V.D.

Mr. President and gentlemen,—I must apologize for bringing such a paper before the Society, dealing as it does with such trivial matters. I have no deep obstruce subject to dilate upon, but as most of my professional life has been spent in remote parts of the world, isolated from any professional brethren with whom to exchange ideas, there are a few little details in every-day practice that I have seen and which appear to me to be of value, and these I venture to bring before your notice and to ask for the favour of your criticism. It is exceedingly probable that they are valueless. No doubt they are old and well known to every one; and if they are not, I shall probably find my pet fads and contrivances scattered to the four winds of heaven when put through the ordeal of discussion. If so I crave your pardon for wasting your time, but the gain will be mine as I am here in the light of an inquirer, not an instructor. I will deal with the subject matter of this paper in paragraphs, as the items are various and disconnected, bearing no relation to each other, and this will facilitate reference being made for the discussion which I trust will take place.

Iodoform. Most of us have used it, and have objected to it on the ground of the abominable smell and expence. In the larger animals the first objection is not so great, but in the smaller, especially house dogs, it is intolerable, and valuable as the application is the smell is almost an unsurmountable objection to its use. This can be greatly reduced by adding to each dram of iodoform a drop of pure carbolic acid and two drops of oil of peppermint, keeping the mixture in a glass stoppered bottle. It almost disguises the peculiar smell of the iodoform, and in my experience does not interfere with its properties. The smell of iodoform can be removed from the hands with the greatest ease by rincing them over with a little common oil of turpentine, leaving it on for a short time, and then washing them with soap and warm water. This plan was told me by a medical officer in India, and I can safely say that it at once gets rid of an intolerable nuisance. The second objection to iodoform is its price. There have been several substitutes put on the market, but they do not appear to have been very successful. I have lately been trying a preparation of iodine and starch recommended by M. Percus, a French military veterinary surgeon, in *Le Journal de Médecine Vét. et Zootechnie*, of February, 1897. M. Percus recommended this preparation from the prescription of Dr. Majewski, an Austrian military surgeon, who used it for the excoriations on soldiers feet caused by the boot when marching. Majewski's formula is tinc. iodine 1 part, starch 2 parts. Percus', tinc. iodine 2 parts, starch 5 parts; and he uses it for harness and saddlery galls as well as a substitute for iodoform. It is easily made, simply mixing the two, iodine and starch, together, allowing the paste to dry, and then reducing it to a powder in a mortar; keeping it dry in a stoppered bottle. It forms a fine powder, free from all objectionable smell, is not expensive, and in the few cases in which I have had an opportunity of using it seems to answer all that is claimed for it.

Substitute for Iodoform. While in Japan a Japanese medical officer told me that during the Chinese war in the Coræa, that when they were out of iodoform they used rice straw ash as a substitute. The straw was burned and passed through a seive. It was applied freely to the wound, after cleansing, and sublimate gauze or linen placed over it, kept in position with a bandage. The rice straw ash appeared to have powerful antiseptic properties, and dried up the wound. My informant

attributed the antiseptic properties to the presence of potassium carbonate, and certainly it is an exceedingly cheap application. There is a notice about it in *The Medical Press and Circular*, October 9th, 1895, page 365.

A Substitute for cotton wool is the sawdust of the deodar, or Himalayan cedar. I was first told about it by Dr. Neve, of the Cashmere Medical Mission. That gentlemen uses it in the hospital of the mission in Cashmere, where there is a surgical practice as large and varied as any in the world. The sawdust is sifted through a seive, dried, and then wetted with a solution of carbolic acid and again dried. It is applied in small bags of native muslin, and can, after being cleaned, be used again. I saw it used while in Sernaggor in several cases of severe injury with large suppurating wounds and it answered admirably. There is an article on it by Dr. Neve in the *Edinburgh Medical Journal* for October, 1894, page 303, that is well worthy of attention.

Sterilized Cotton Wool. I am quite aware that I run the subject of antiseptic surgery to death, and I am also quite aware that others say it cannot be applied to our patients, or that it is no good. Into this point I will not venture, as it is such a large one that it would probably occupy many meetings of the Society to discuss it, but will start with the statement that sometimes it may be desirable to obtain some sterilized cotton wool quickly. Of course it can be purchased ready prepared, but there are positions in which one might be placed where this could not be done. The ordinary method of sterilizing cotton wool is to bake it in an oven, but this takes time and care ; if the temperature is too high the wool gets burned, or so singed as to be useless. If kept too low it is not sterilised. A small piece of cotton wool can be quickly sterilised by twisting it round a stick, dipping it in a saturated solution of alcohol and boracic acid, and then setting it on fire. The alcohol burns out while the borax protects the cotton. When the flame begins to burn green blow it out.

Pocket Spirit Lamp.—It is sometimes desirable to get a spirit lamp for various purposes, such as to run the blade of a knife or lancet through, or to seal up capillary tubes with. A spirit lamp is not often found in a house, and is a clumsy thing to carry in the pocket on horse back. An improvised one that will burn several minutes can be made out of an old metal thermometer case into which a piece of wick is pushed and then filled with spirit. If a half inch of india rubber tubing is then cut off and pushed over the joint it is quite water tight, and can be carried in the pocket like an ordinary pencil case. I first got the idea from a native vaccinator in the Punjab, who was using one, to sterilize the points of his lancet.

Sterilized Silk Sutures.—Ordinary silk or hemp sutures can be quickly sterilized with paraffin. It is first dipped in æther or oil of turpentine and then at once plunged into boiling paraffin, which displaces the æther or turpentine with a certain amount of ebullition. The thread is then taken out of the paraffin and placed on a pad of blotting paper in an oven or before a fire to remove the excess of the paraffin, and pulled through a piece of linen or lint, which can be sterilized by the alcoholic solution of borax as I have before described. The thread can be placed in the æther and paraffin in a hank or bundle, but it is more convenient to wind it round something such as a piece of glass tubing. There is a note on this in *Le Recueil Méd. Vét.* of 30th Nov., 1893.

Tincture of Iodine as an external application I have known objected to on account of its staining the skin and hair. The following formula will make a colourless tincture : hyposulphate of soda 10 parts, iodine 10, distilled water 10, mix, add 16 parts of liq. ammonia fort. and 75 parts spirit ; let stand two or three days and then filter. I forget where I first was told of this, but I think it was by a Dutch medical man in South Africa.

A Substitute for a Syringe.—Syringes are usually used to cleanse wounds with, and I think most of us have had difficulties with them. In the first place they are likely to get out of order and broken. In the second ordinary ones don't hold enough fluid for veterinary purposes, and the larger ones are not only very expensive but clumsy to carry about ; and myself I much prefer a syphon with an irrigation can. Here, again, the question of portability comes in as in ours we require a much larger flask than in human practice. A syphon can, however, be easily made with a yard or so of india rubber tubing, which is portable enough, and a stable bucket. If held sufficiently high, which can be done by a rope from the roof, it will produce a stream of fluid with as much force as a syringe, and with the great advantage of being continuous. It is the usual custom to set the syphon running by sucking the tube, it certainly is not pleasant to get a mouthful of some medicated fluid, and it may be very dangerous. This can be entirely avoided by gradually coiling the entire length of tubing up in the bucket so that it becomes full of fluid, the air being driven out. If the mouth of the tube is then grasped with the fingers of one hand and a foot or two lower down with the other, and then quickly draw over the edge of the bucket below the level of the water the syphon will act. Care must be taken that the weight of the tube on the edge of the bucket does not close it. This can be avoided either by fastening it with a piece of string to the handle, or else having two lengths of tubing united by a V shaped piece of glass of metal tubing which will hang over the edge of the bucket at its angle. I have used a syphon of this nature for many years past in preference to syringes for cleansing wounds, also in cases where continual irritation was required ; fastening the mouth of the tube above the spot by a tape or bandage, and contracting the flow either by putting a perforated card into the mouth of the tube or binding it up with a string.

Improvised Enema Apparatus. The usual form of the enema funnel is an awkward thing to carry about, and unless one's own is brought one is seldom found in a stable on an emergency. A very efficient one can be made with a foot of the ordinary vulcanized indiarubber used for garden hose, and a tin funnel, or if this is not at hand a wine or beer bottle. The bottom of the bottle is cut off by the old school boy plan of winding a string round it two or three times, fastening a stick to each loose end of the string getting some one to hold the bottle firmly and then pulling the string backwards and forwards as quickly as possible till it either breaks or the glass gets hot with the friction, when the bottle is at once plunged into cold water up to the level of the string —no further—and with a few taps with a stick the bottom cracks off. The neck is fastened into the end of the tube and makes a funnel. I have have often used this improvised apparatus and it is very efficient. I had one made in India of leather and it acted very well, was very portable and lasted a long time.

Leather Bandages. Bandages of elastic or indiarubber are sometimes used on the limbs for a variety of reasons. In warm climates they quickly perish, and sometimes in out-of-the-way places they are difficult to procure. In India I have made use of bandages of the native made chamoise leather for this purpose. These chamois skins are prepared all over India and are very cheap. They are cut into lengths as broad as desired and stitched together till a bandage is formed of the required length. This is damped—not wetted—before being put on the limb, and in drying it shrinks and produces a considerable amount of pressure.

Preservation of Indiarubber in Hot Climates. The following plan of preserving india-rubber articles, such

as enemas, blowers and tubing in hot climates, where they perish very quickly, may perhaps be useful. It is simply to keep them in an air-tight tin box, with a small gallipot or vessel filled with ordinary kerosine oil. The oil evaporates with the heat and the vapour appears to have a preservative effect on the india-rubber. I managed to keep some tubing for two hot seasons in the Punjab, where the thermometer inside the house goes up to 120°, which under ordinary circumstances would have perished in a fortnight.

Drainage aperture in bandages.—In compound fracture of dogs' limbs it is necessary to make an opening or window in the splint or bandage for the purpose of getting at the wound to clean it. I do not know, gentlemen, if it is your experience, but it is mine, that although it sounds simple enough to say cut a hole in the bandage it is not a very easy thing to do so. I have found the following little plan of Dr. Esler, of Victoria, Australia, to answer satisfactorily, viz., to first put a small pill box over the wound, using one sufficiently large to embrace it, then adjust the limb with starch bandages, winding them round the pill pox so as to avoid covering it, giving the bandage a twist as it passes round the side if necessary. The limb is held in the usual way till the starch or plaster is set, when the pill box can be withdrawn, leaving a round window in the bandage. It may happen that the pill box will stick, but if it does the bottom can be cut out and the rim is not in the way. There is an article on this in *The British Medical Journal*, Jan. 2nd, 1897.

Gutta-percha splints.—For the simple fractures I much prefer thick sheet gutta-percha for splints. I think it is easier applied and much cleaner than starch or plaster, and does not crack. When warmed in water it can be molded accurately to the limb, and hardens at once. The only thing is that it is advisable to punch holes in it, for the exhalation from the skin. I do not know if the precaution is absolutely necessary, but I am inclined to think that I have had one or two cases go wrong from neglecting it. The holes can, however, be easily made by a saddler's punch that is used for making holes in traces, and a hammer. It is advisable not to make them too large, as in adjusting the gutta-percha to the limb they will stretch.

Resection v. amputation in dogs.—While speaking of fractured limbs of dogs I suppose we have all been called on to perform amputation in these animals, and I cannot help thinking we sometimes are too ready to do so. I certainly plead guilty to this myself, and doubt whether in certain cases resection of the joint would not fulfil the purpose as well. It may be asked what on earth is the use of a dog with a resected joint. I can only answer, absolutely none; but the owners of them are more inclined to have a sentimental regard for them than for larger animals, and I have several times found that when they shrink from having the limb of their pet amputated they will consent to resection of the joint where the limb is preserved; and though useless there is not the mutilated appearance that a stump has. I have performed it with fairly good results in both the elbow and carpus. I do not propose to enter into a description of the operation, as it is a subject on which a paper might be written itself, suffice to say that with proper antiseptic precaution, anæsthesia, and a little neatness of hand, neither it nor the process of wireing is difficult; and the best description I know of it is in Traves's Surgery.

Manna as a laxative.—I should say that as common a cause of illness as any in house and pet dogs is constipation from want of exercise, and it is a matter that I suppose all of us who have much dog practice have been consulted on often. Of course it can be overcome by diet, laxatives and enemas, but to the first it is difficult to get owner to attend, and most drugs being nauseous are troublesome to give, so are enemas. A very simple drug which is largely used in France is manna, but it would not appear to be much in favour in England. It is sweet to the taste, and I have found that dogs not only readily take it in their food but get to eat it by itself, like sugar. It used to be used as an old fashioned sweatment for children to regulate the bowels, and on one occasion when called in to a young lion suffering from chronic constipation I prescribed it with the best results, the animal eating it readily.

Axillary temperature in dogs.—Under certain circumstances it can be easily imagined that it would be excessively embarassing to take the temperature of a dog *per rectum*, but it can be done with a certain amount of accuracy in the fold of the thigh, the dog being made lie down on his side, the thigh drawn up and the thermometer inserted under the fold of skin. Of course, as in the human axilla, this is not so accurate as the rectum or mouth, nevertheless it is fairly so.

Destruction of rabid and other dogs.—It is sometimes not desirable to use firearms for the destruction of a dog, neither is it so to administer poison by the mouth, either from the sentimental dislike to the struggles of the animal or the danger of getting bitten in administering it. A very effectual method is a dose of hydrocyanic acid per rectum. It can be administered with an ordinary glass syringe with the greatest ease and without any struggling or howling. I have used this method for the destruction of rabid dogs confined in a cage when the use of a gun was objectionable. The tail is sure to be protruded through the bars and can be grasped and the hind quarters pulled up to them. The dose can be administered with perfect safety by an assistant by means of a glass syringe, and the whole operation over in less time than it takes to describe. The only danger is that the dog may get his head round and some saliva be splashed on the hand, but if a glove is worn this will be prevented, even this is hardly necessary, as I have found that if someone stands opposite the dog on the other side of the cage his attention is attracted there.

Transport of Mules.—In England one has not a great deal to do with mules, but their character for obstinacy is well known, and any one who has had anything to do with them will soon become acquainted with their marvellous power of kicking. In my earlier days in the East I have spent many a sweltering hour, sorely trying to the temper, in endeavouring to load them into ships and railway trucks. If, however, some soiled litter and the droppings of other mules is spread on the gangway, deck, and floor of the horse box, and one mule brought quietly forward, allowed to put down his head and smell at it, he will walk quietly on board and the others follow him like a flock of sheep without any fuss or bother. We can sometimes learn things from the most unlikely sources, and this was shown me by a sailor, the captain of an Indus river steamer.

Hypodermic Injections.—When a hypodermic injection is administered I have seen it done by pushing the needle of the syringe through the skin with a prod, or else by a fold of skin being pulled up and the needle thrust through below the finger and thumb, sometimes causing a certain amount of pain. This can be avoided by pinching up the fold of skin and forceably compressing it a few seconds which deadens feeling. If the needle is then thrust in above the finger and thumb it will cause but little inconvenience, and when through the grasp can be relaxed and the fluid injected. I can speak personally of this, as I first learned it from a medical friend of mine in India, who injected morphia in my back for a severe attack of malarial lumbago.

Urine testing—Preservation.—We may desire to test the urine. After it has been collected we may have to send it some distance to an analyst, or if we elect to do it ourselves we may not be able to attend to it at once. In warm weather urine easily becomes putrid and a correct analysis is spoilt. The following method will preserve

it a long time and the analysis can be made at leisure Mercuric cyanide 10 grammes, water 100 grammes. Add 2 cc. of this to the vessel containing the urine. I believe the receipt is Dr. Hugnet's, professor of the Medical School at Clermont Terrand, but it was first shown me many years ago by the gentleman who was then Chemical Examiner to the Govt. of the Punjah.

Blind v. Twitch.—I think there is sometimes a certain amount of abuse of the twitch by stablemen, farriers etc., for the control of vicious or nervous animals. Any one who has ever had to do with them will, I think, allow that there are few more vicious brutes than an Indian country bred stallion. At one period of my life my duty was to examine some hundreds of these yearly at the various Indian horse fairs, with a crowd, noise and dust, and the animals in a fever of excitement from a lot of mares being picketted close to them; rendering it a work of peril to one's neck to put a hand on them. I found a twitch was an intolerable nuisance sometimes making the animal ten times worse. I then adopted the native plan of blind-folding and found it answer well, so much so that I never went into a fair without taking one or two blinds with me. They were made out of a square of old blanket, with a tape stitched across to catch behind the ears, and four more at each corner to tie the blind under the chin. It was laid on the back like a saddle, which the animal did not object to, with a jerk run up the neck so that the tape caught behind the ears, the blind falling over the face and the four tapes tied before he well knew where he was. Usually one man was enough to hold the horse quiet with this on, whereas with a twitch three or four were sometimes necessary. I have used blinds with horses that were difficult to shoe, and lately with an army remount that required four or five men to saddle him and hold him to be mounted. With the blind on one man can put the saddle on, another holding his head. His rider mounts him and the blind is taken off without any fuss whatever. I have also lately used it with a horse that got an injury to the chin which he would not allow to be dressed; with the blind he stands perfectly quiet.

A Continental Twitch. This, gentlemen, is the form of twitch which is largely used on the continent. It has the advantage that when put on to the upper lip it is not necessary to have a man holding it. If the string is left long enough to go on the ground the operator can place his outer foot on it. If the horse moves by placing the other foot on the string it is jerked tight on the nose, by this plan the hands are free.

Dental Examinations. We may desire to examine the interior of the mouth and not have a balling iron at hand. A very fair substitute can be found in a bit, the cheeks being placed across the mouth and the hand grasping the bit. I learned this from an Afghan horse dealer in the Peshawur bazaar. Also I learned from the same man to examine the teeth by turning the horse's tail to the sun and reflecting the light into the mouth by a piece of looking glass. In England where the sun is not always to depended upon a bull's eye lantern could be used.

The Cicatrix in Neurotomy. In the operation of neurotomy it is desirable to leave as small a scar as possible, and yet an inch, or an inch-and-a-half, of the nerve should be removed to prevent reunion. With the following plan a very small incision will suffice. With the point of the knife an incision an eighth of an inch, or even smaller, is made through the skin. A blunt curved needle, such as a bent packing needle, with the point ground off is passed through a layer of the subcutaneous tissue, which is divided on the needle, which is again inserted and layer by layer the tissue is divided till the nerve is exposed. This is taken up with a blunt hook and divided. The lower end is grasped with a pair of strong forceps, drawn upwards till an inch is brought out, and divided with the scissors, the wound being sutured. If done with proper antiseptic precautions the cicatrix is exceedingly hard to detect. Of course an Esmarck's bandage to render the limb bloodless must be used, and I use chloroform. It is also best to have the edge of the neurotomy knife straight, so that the back and edge converge at an acute angle, to a fine point with which the incision is made.

Poultices. In cases of accidental pricks from nails in the foot, or suppurating corns, after removing the horn it is almost the universal custom to put the foot into a bran poultice, and, as every one must have noticed, when the poultice is changed a certain quantity of the bran gets lodged in the hollow from which the horn is removed, and from which it may be, or more frequently is not, picked out. Whether it causes any direct harm I am not prepared to say, but I cannot help thinking that stale and sour pieces of bran in connection with a wound cannot do any good, and would be better not there. The plan I adopt is first to envelop the foot in a cloth or duster, and then put it into the poultice so that all the benefit of the heat and moisture is obtained without any of the particles of bran coming into direct contact with the wound. The cloth is changed at the same time as the poultice. I am rather doubtful whether bran is the best substance to apply moisture and heat to the foot, on account of the tendency it has to ferment and turn sour if not frequently changed, which is sometimes difficult to get done, and in parts of the world where it is not obtainable I have used pads of tow, or better still, the cotton waste used for cleaning engines, with as good effects. Both these can be kept moist with warm water and even if not changed for some days do not undergo fermentation and give off the peculiar sour smell that stale bran does. I have also used sawdust.

A divided shoe for contracted heels. I would like to mention a method of shoeing I have seen used in the East for horses with narrow, contracted heels. I speak under correction, but as far as I am aware I do not think it is used in England. It is using what is known as a bullock's shoe, or in other words a shoe cut in two at the toe—in two halves, with an interspace of about a 1-16th of an inch at the point of junction between the two. It no doubt is a modification of the jointed shoe, and the French plan of eucasteleur, for which there are many elaborate pieces of apparatus for expanding the heels, a full account of which will be found in Peuch and Toussaint's "Veterinary Surgery." This plan was shown me by Veterinary-Colonel John Anderson, late I.V.S. Bombay Army, and was frequently used by him. I have also had good results with it in India, but I have never had an opportunity of using it in England. At all events the plan is simple, and may be worth a trial.

An Arab test for in-foal mares. In the earlier stages of gestation it is not always easy to say whether a mare is in foal or not, and it is not always desirable to make an internal examination. The Arab plan is to put a few drops of water in the ear. If in foal it is said the mare will only shake her head, if she is not the whole body. I do not vouche for the correctness of this, I only mention it for what it is worth, but the Arabs are a nation of born horsemen, and much of their literature deals with equine matters, and I am one who is of opinion that practical hints are not to be despised, no matter from what source they come.

It is usually the custom to employ a rope for a side line to throw a horse with, or when down to place round the fetlock to extend the limb with in certain operations such as neurotomy and firing, when it is desired to get the skin tight. As a rule a rope answers well enough, but the objection is that it is round, and being made of hemp, hard, and might possibly abraid the skin. It may therefore be desirable to use a flat line not a round one, and a good one can be made out of flat cotton lamp wick. This can be got nearly any width desired, and if it is not considered strong enough, two or more thick-

ness's can be stitched together. It can be used for leading and lunging reins, and in India I used it for reins on polo bridles. In that country, playing polo in the summer, the heat is so great that the perspiration runs over one's hands in streams, and leather reins get so wet and slippery that it is nearly impossible to hold a pony with them, whereas with the cotton lamp wick a grip can be obtained. I learned this by seeing a Chinese tailor in Hong Kong using a piece of lamp wick as a driving strap for the wheel of his sewing machine. Although perhaps somewhat foreign to the subject, this annoyance of perspiration running over the hands can be to a certain extent remedied by tying a handkerchief round each wrist, and a little powdered resin in the palm of the hand will give a grip to the rein.

Gentlemen, I am afraid I have wearied you with a number of disconnected facts, and must again apologise for bringing such a paper before you. I thank you for the courteous way you have listened to me, and I have put these small details before you for what they are worth. Some may perhaps be of some use, but I expect most of them are valueless; but as I said I have come here to learn, not to instruct, and I trust that my efforts will only be a lever to start a discussion in which many more valuable details of every day practice, will be brought forward, which to the majority of us are of as much importance as a scientific discovery in medicine or a brilliant surgical operation.

Discussion.

Mr. Rowe, in opening the discussion, said that he never used iodoform, but employed oil of cloves instead. He described how he bandaged dogs legs successfully with mill board and the use of glue.

Captain R. Moore remarked that chinosol was preferable to iodoform, not only because it emitted no smell but because it was more powerful than iodoform. He had, too, tried creosote with good effects. It was also odourless. Iodide of starch was useful in cases of broken knees, burns and scalds. He objected to poulticing which, in his opinion, served as a means of conveyance of all sorts of germs.

Mr. T. S. Price said he too, like the previous speaker, had given up poulticing in the majority of instances when horses were pricked or had picked up nails. In the latter case his plan was simply to draw the nail. He never removed the shoe at the first start, nor had he recourse to poulticing or fomentations. Nor did he even cut the sole out. He simply drew the nail. Then he procured some carbolic liniment and tow and blocked the wound. The next day if the horse was better he let him alone, and if on the succeeding day the animal had improved he still did nothing. He invariably found in the case of pricks or picking up of nails a carbolic liniment with non-cutting was the best treatment imaginable. As to bandaging dogs for fractured limbs, Mr. Price pointed out that if they applied a gutta-percha bandage to a fractured limb they were likely to do a great deal of harm unless they took the precaution to prick the bandage all over with holes to admit of ventilation. With regard to twitches he employed, he said, an iron twitch half the size of the wooden one produced by Major Nunn. Mr. Price described his twitch which, he remarked, answered very well.

Mr. Upton pointed out that unless they injected some antiseptic into wounds they were likely to have lockjaw supervening.

Mr. Place said he had not given an order for iodoform for the last six months. He used iodine starch mixture instead, and he found it quite as effective as iodoform as well as cheaper. With respect to a syringe for injecting an enema, he had found a simple piece of rubber tubing serviceable and capable of answering all purposes. As to pricks in the feet he, like preceding speakers, had abandoned poulticing as a remedy.

Mr. L. Savournin observed on the subject of poultices that he had found half linseed meal and half bran did not prove so sticky and slimy a poultice as linseed solely.

Professor Macqueen said the main desire of the veterinary surgeon was to keep clean the wound with which he had to deal; and it mattered little what agent was used to effect this purpose so long as the end was attained. While he agreed with previous speakers as to the usefulness of gutta-percha as a bandage for a dog's leg after fracture, he pointed out that there was a much more convenient, cleaner, and more surgical looking splint than this, and that was the material known as poro-plastin. This could be moulded into any form and applied to any leg or any part of the leg. Poro-plastin was probably a little expensive, but apart from the expense there was no objection to it as a splint. It was what human surgeons used, and speaking from experience of its use he considered it was one of the best splints they could possibly have. He had no patience with veterinary surgeons who amputated dogs legs, and he considered that any practitioner who allied himself with that form of cruelty did not consult the best interests of his profession. In his opinion maimed dogs should be destroyed save, perhaps where a valuable dog was retained for stud purposes. Various suggestions had been made as the treatment of constipation. A good acting agent was syrup of buckthorn in small doses, or a little glycerine. Adverting to methods of killing rabid dogs, the Professor suggested as a convenient and speedy way an injection of prussic acid, but not necessarily in the rectum. Alluding to the twitch produced by Major Nunn, the Professor characterised it as "a most diabolical instrument of torture," the use of which would probably secure the interference of the Royal Society for the Prevention of Cruelty to Animals. Mr. Price's twitch, nine or ten inches long, was much preferable to the formidable instrument shewn by Major Nunn. Blinds, of course, were useful, but some horses, especially well-bred horses, stood much quieter without blinds. A great deal depended upon temperament, and he did not think they could set down rules of procedure for all cases. He did not poultice. Poultices, he considered were an abomination when not used with discretion. Poultices were now mainly employed to soften the horn. He did not think that with the mere heat or moisture communicated by a poultice they would have pus unless they had something else, and a much more essential thing than heat, namely an organism. Professor Macqueen went on to say that if they wanted to soften a hoof at any time there was not the slightest objection to dressing it over with chloroformed oil. Chloroform had a wonderful power of softening a hoof. If they required a small area of hoof softening for the purpose of an operation, there was no quicker way of doing this than by saturating the part with chloroformed oil. Allusion had been made by Major Nunn to half shoes. These shoes were not new. They were introduced when jointed shoes were introduced. Side lines, such as Major Nunn had described, were not at all rare Concerning neurotomy, the Major remarked that a small opening should be made. Everybody was agreed that the smaller the opening the better. The mode of performing the operation originated in Germany, and the father of the idea was Professor Nicols. He thanked Major Nunn for enlightening them as to various points. Many of those points were old, but they were all the better for being occasionally reminded of the things that were old.

Mr. Barrett advocated the use of the syringe against the syphon, and, regarding poultices, he said he had long abandoned their use, with good effects. Recovery had been more rapid, the per centage of loss much lessened, and his clients altogether better pleased since the disuse of the poultice. Where horn had to be removed it was

no doubt necessary to apply warmth and moisture. His *modus operandi* was to place the foot of the horse in water as warm as the animal could bear for a short time. Then, when the horn was sufficiently soft he removed it and applied anti-septic dressings. To assert that wounds were properly treated by mere cleanliness was, to his mind, not satisfactory in the face of abundant evidence that organisms could enter wounds unless anti-septics were used pretty constantly. Adverting to the subject of neurotomy, Mr. Barrett said it seemed to him raher difficult to get at the nerve. As to dogs unmistakably suffering from rabies he was of opinion that they should be poisoned at the earliest possible opportunity. With regard to blinds he thought they were sometimes more effectual than twitches. The use of blinds was not attended with pain, and he considered this was the most effective method of restraining a restive horse.

Mr. DOWELL pointed out that a solution of carbolic acid was more drastic and effective in treating the wound on a horse's foot than pure carbolic acid was.

Mr. PORCH mentioned how he formed of a piece of hemlock stem and a pig's bladder an instrument which satisfactorily answered the purposes of a funnel or a syringe. Although he had not abandoned the use of the poultice he thought harm was done by applying poultices too long. The important point was to know when to stop. In cutting out a horse's foot he was in the habit of using a French searcher. He found nothing else so effectual in reaching the bottom of a prick from a nail. He fired many horses standing, and found blinds as well as twitches very useful, the latter especially in the country.

Mr. PRUDAMES explained that he made a bandage which, he found, retained its firmness almost indefinitely, consisting of chalk and gum water. This was quite as efficacious as plaster of Paris, and was readily removable by a bath of warm water. He had tried chinosol in various forms for several years, and liked it.

Professor F. HOBDAY said that in cases which he had treated with chinosol he had never found the least trace of pus. He used about ten grains to a quart of water and found it quite satisfactory. It was not altogether odourless, but gave off a smell like that of burnt custard powder. He had had recourse, with satisfactory results, to treatment with a mixture of iodoform and starch, an account of which he read in *The Veterinary Record*. Both in regard to horses and dogs he discovered that this method of treatment was far superior to the old-fashioned way, certainly in regard to dogs suffering from burns and scalds. Professor Hobday went on to express his disagreement with Professor Macqueen when the latter said that the amputation of one or more legs of a dog was cruel. Recently he (Professor Hobday) had performed amputation in the case of a very valuable dog which now hopped about like a kangaroo, and had since the operation served a bitch. As to antiseptic surgery he held that they should apply it as far as possible. The veterinary profession were making great strides in this direction. Concerning the killing of dogs by hydrocyanic acid he mentioned that after numerous experiments he found the quickest way to thus kill a dog was by inhalation if this could be managed. The next quickest way was by injection directly into thorax. The next quickest way—there was merely a difference of seconds—proved to be a race between an administration by the mouth and a hypodermic injection. The mouth was as quick, if not quicker, than a hypodermic injection.

REPLY.

Major NUNN, in replying, said the hope he had expressed that his paper would be pulled to pieces had been fulfilled even beyond his expectations. (Laughter.) With regard to the wooden twitch he had shown, he admitted it was a very clumsy thing made hurriedly by a farrier at Chelsea. It should have been about one-fourth the size. Speakers who took part in the discussion appeared to think that he advocated certain lines of treatment in certain matters. He had, it appeared, failed to make himself understood that he advocated absolutely nothing. All he did was to throw out certain suggestions, and asked whether, in given circumstances, such a course should be pursued rather than another and a different one, while at the same time he mentioned his own methods. Mr. Rowe had mentioned various essential oils in deodorising iodoform. He was obliged to him for the hint. That these other oils were preferable to peppermint never struck him. One of the speakers characterised as almost cruelty the amputation of dog's limbs. His (Major Nunn's) experience of amputation was in the East where, as they knew, Hindoos had a horror of the destruction of animal life. Mr. Rowe asked about manna. The Major replied that he really did not know whether it was a drug in the pharmacopœia. It was a vegetable product of gum—one of the acacia gums. It was something like gum Arabic to look at. He did not know whether it was mentioned in the British pharmacopœia—it was in Kauffmann's therapeutics. It appeared that the half shoes mentioned were not new. The shoe was simply divided in the centre at the toe. Mr. Rowe asked about monstrosities. Well, he (Major Nunn) had seen a considerable number of monstrosities. In this connection he mentioned that in the Punjab and the lower hills of Cashmere there was a particular breed of sheep with four horns. Speakers seemed to be under the impression, with regard to the examination of a horse by the mouth, that he advocated the use of a particular bit. All he meant to say, however, was that if a balling iron was necessary and one was not at hand, an ordinary bit could be used sideways in the mouth. He merely suggested this as a substitute for a balling iron. He had been misunderstood as saying that in most diseases in dogs a purgative was required. What he did suggest was that if a purgative was needed he found manna was a convenient thing to give on account of the readiness with which dogs took it. He agreed with Professor Macqueen that a rabid dog should be kept alive if it were known to have bitten any one, but if it were perfectly certain the animal had not bitten any one he failed to see the object of keeping it alive. He should avail himself at the first opportunity of the hint he had received as to chloroform softening the horn. Mr. Porch had referred to the French searcher. He (Major Nunn) had used that instrument and, in his opinion, it was better than the English searcher.

On the motion of Mr. Butters, seconded by Mr. Taylor, a cordial vote of thanks was accorded Major Nunn for his paper; and the proceedings terminated with thanks to the Chairman.

EXTRACTS AND NOTES.

MEAT INSPECTION AT CREWE.

At a meeting of the Crewe Town Council on Dec. 1st., the Mayor (Councillor C. H. Pedley) presiding, Councillor Hoptroff referred to the subject of having a butcher's jury, proposed by the Crewe and district Butcher's Association, to inspect meat in the Crewe Market, which might be suspected of being unsound. At the Health Committee the proposal was "laid on the table." Councillor Hoptroff thought the proposal must have been misunderstood by the members of the committee, or not sufficiently explained to them. The Crewe and District Butchers' Association covered a radius of ten miles from Crewe Market Hall, and was very representative of all the butchers in Crewe and dis

trict. At the quarterly meeting of the Association they went into this question thoroughly, and decided to ask for an interview with Dr. Young, the medical officer. He (Councillor Hoptroff) was one of the deputation who waited upon the medical officer, who seemed to be very much in touch with everything they said, and was quite agreeable for such a jury to be formed. Dr. Young took a very strong stand in one matter, namely, that he would allow no interference whatever by a butchers' jury or any number of butchers respecting any decision he might come to on meat being sound or otherwise. The butchers' jury did not want to interfere with any decision of the medical officer's. They did not wish to make themselves into lawyers or anything else. (Laughter.) They simply wanted to exercise closer supervision over the meat that was brought into the market. No number of medical officers could detect the bad meat that was sometimes brought into the markets—it was brought in in such a peculiar way, and under such circumstances, that a medical officer would have to patrol the market all the day, from morning till night, to detect it.

The Mayor: What do the butchers' jury propose to do?

Councillor Hoptroff said they wanted a closer supervision over the meat brought into the market from the district, and when it was known that they had a butchers' jury, who were keeping a sharp look out for meat of doubtful quality it would probably have a tendency to induce people to bring in meat of better quality. It had a very bad effect on the trade of the market when a butcher was convicted of offering bad meat, and the object of the butchers' jury was to assist the medical officer by directing his attention to any samples which might be regarded as of doubtful quality. Such juries have been formed at Stoke, Burslem, Fenton and other places, and were doing good.

The Mayor: If the jury found anything suspicious would they draw the attention of the medical officer to what they considered objectionable?

Councillor Hoptroff: Certainly. They did not want to tell a man to take it away, for he might take it to another place.

Alderman R. Pedley thought it was a very important suggestion.

Councillor A. G. Hill said that nothing but good could come of it. They had the assurance of Mr. Hoptroff that there would be no attempt to interfere in any way with the sanitary inspector or medical officer; it simply meant that they would give him information of any meat which they thought was of suspicious quality, and information of that kind should be helpful.

Alderman Latham said that after the explanation of Councillor Hoptroff he wished to recede from the position he had taken up in seconding a motion that the proposal "lie on the table." He thought the proposal might have interfered with the medical officer of health.

Councillor Robertson also had misunderstood the proposition. He was under the impression that the object of the jury was to act—it might even be in opposition to the medical officer supposing his opinion were different from theirs. It was still open to the butchers' association to appoint such a jury without the consent of the council.

Councillor Hoptroff's suggestion to refer the subject back for further consideration was agreed to.—*The Crewe Chronicle.*

A GOLD MEDAL has been awarded to Messrs. Arnold and Sons of 26, 30 and 31, West Smithfield, and 1, 2, and 3, Giltspur Street, E.C. at the Victorian Era Exhibition, for excellence in the manufacture of Surgical Instruments.

AN ASSISTANT CHARGED WITH MANSLAUGHTER.—ACQUITTAL.

At the Assizes at Bristol, on November 26th, before Mr. Justice Hawkins, Andrew Garrod (25) clerk, pleaded not guilty to feloniously killing and slaying his brother, William Thomas Garrod. When he was put up for trial Mr. Weatherly, who appeared for the prisoner, said he now desired to plead guilty. Mr. Metcalfe said he appeared for the prosecution. The Judge commented on the fact that the defendant had not been on bail. Mr. Metcalfe said he was on bail between the hearings at the Police-court, and bail was subsequently fixed at two sureties of £10 each and himself in a like sum. The Judge said if a man were guilty of murder or manslaughter, and the evidence was very cogent as to wilfulness, of course it was different thing, but here was an offence which was as devoid of crime as it could well be. Mr. Metcalfe: Of course, it is not for me to say what the magistrates should do, but I don't think any harm would have been done if he had been let out on his own recognisances. The Judge: I should have done so. Mr. Metcalfe: He was on terms of affection with his brother, and Mr. Leigh, his employer, is willing to take him back. Of course, it was not a bad case in any sense. The Judge said it was an incautious act. What would have been inexcusable in a person with skill and knowledge might be pardonable in one ignorant. The Judge then briefly reviewed the facts of the case, the deceased being a sailor who came home very drunk and noisy. Defendant administered a drug to quiet him, which drug he had seen his master use for horses. He (the judge) would advise Mr. Leigh to put dangerous poisons under lock and key in future. Mr. Metcalfe: In justice to Mr. Leigh I must say it was labelled "Poison." The Judge said he knew that, but it would be better to lock poisons up. What the prisoner did was done with the kindest intentions, and nobody who knew the facts would think the worse of him because of the mistake that he had made. Mr. Weatherly said he could not add anything to what his lordship had so kindly said. The defendant felt that he had made a mistake, and that he ought to throw himself on the mercy of the court. The Judge said he had a feeling that when a man was resident in a place, and had not committed wilful murder or some other offence as to which the evidence was so cogent that heavy punishment was practically certain to follow, he ought to be admitted to bail on easy terms. He was sorry to find that the prisoner had been detained in prison. He hoped that those who had to do with granting bail would remember that the object of bail was to secure attendance at trial, and in a case of this character very small bail would have been sufficient. Some thought that sureties were necessary according to law; he did not, and he thought that in this case the man's own recognisances would have been sufficient. But he had been detained in prison a month waiting his trial. Now, in his opinion that was quite enough punishment; and he would pass no further sentence. He would have been glad if prisoner had been free, for he certainly would not have sent him to prison for the first time for an offence or this kind, and looking at his good character. No doubt he had suffered, and would suffer, because he had caused the death of his brother. He could not free his mind from that. Therefore he should order the prisoner to enter into a £10 bond to come up for judgment when required, and after what he had said prisoner might be quite sure that he would never be called up. Prisoner then left the dock, there being some applause when the judge gave his decision.

RABID DOGS IN LONDON.

We have received the following notice to dog-owners from the Board of Agriculture :—

In connexion with the case of rabies in London which was referred to in *The Times* of Thursday, it has been ascertained that three of the dogs alluded to as having been said to have been bitten by the rabid dog found in Hyde Park on October 31, belonged to the same owner. They were being exercised by their owner on that morning in Hans Crescent, when they were all three attacked and bitten by an unmuzzled rough wire-haired black-and-white fox-terrier. About the same time and place this dog was seen to attack and roll over two smooth-haired fox-terriers coming from the direction of the Hans Crescent Hotel. The owner or owners of these two terriers are not known, but it is believed that they reside in the neighbourhood.

The rough-haired terrier was then seen to bite a collie that was with a gentleman in Sloane Street.

The description of the rough-haired fox-terrier coincides in every respect with that of the rabid animal which was seized in Hyde Park some two hours later on the same morning and which was subsequently destroyed at the Dogs' Home, having bitten a man there, and there is little doubt but that it was the same animal, and that it also was the cause of the case to which attention was drawn yesterday. One of the three dogs above mentioned subsequently became ill, and the owner, having seen the published account of the Hyde Park case, had all three dogs destroyed.

The serious consequences which have followed in each of the cases of which particulars are known render it most desirable that the owners of the other three dogs which have been bitten, or of any other dogs which may have been attacked in the same manner that morning, should communicate the facts to the Board of Agriculture, so that every precaution may be adopted to minimize the danger to the public which may arise.

The Carriage of Live Stock.

A case illustrative of the defective regulations for the transit of cattle over long railway journeys, which has been the subject of special inquiry by the Board of Agriculture, came before the County Magistrates at Canterbury, Mr. John Heath, of Newbury, Berks, being summoned for cruelty to two cows. The animals were consigned to the defendant's brother at Sturry, near Canterbury, and were over 30 hours on the rail, receiving neither food nor water, and being allowed to get into a deplorable condition through over-stocking. The journey should have been covered in 18 hours, and a similar case having happened last year the consignee brought the case before the Society for the Prevention of Cruelty to Animals, expecting the railway companies would be summoned. The Society, however, summoned Mr. Heath, finding that the companies were not liable under the Privy Council regulations, and that he had made no arrangements for feeding or watering the animals during transit. The Bench refused to convict, Colonel Laurie, C.B., observing that the responsibility should certainly rest on the railway companies. The animals were 13 hours travelling 17 miles, from Newbury to Reading, and at Tonbridge the sidings were too much blocked for them to be taken out and fed.—*The Morning Post.*

Stamping out Anthrax.

An alarming outbreak of anthrax was reported on Wednesday evening to the county authorities of Dumbarton by Mr. Malcolm Walker, veterinary surgeon and inspector for the western district under the Contagious Diseases (Animals) Act. Mr. Walker had been called upon to attend two cows belonging to Mr. M'Intyre, dairyman, Middleton Street, Alexandria, which had been ailing. As he suspected the animals to be affected with anthrax, he sent a sample of the blood to Principal Williams, of the New Veterinary College, Edinburgh, who having examined it, reported that he had found it swarming with the baccilli of anthrax. On receipt of this report, Mr. Walker at once passed an order on Mr. M'Intyre forbidding the sale of his milk. The cows affected had been grazing in the neighbourhood of Balloch, and Mr. Walker, pending the decision of the County Council, as local authority, and the Board of Agriculture, has sent notice to farmers and cattle dealers in that are aforbidding the removal of all cattle.—*N.B.A.*

From Milk Boy to Mayor.

Councillor Joseph Hunting, who has just been chosen Mayor of Peterborough for the ensuing year, has had quite a romantic career. He was born in the little village of Yoxford, Suffolk, where his father, Mr. William Hunting, was a small farmer and carter. He was one of a large family, and passed the early days of his life as milk boy on his father's farm. The rudiments of his education were imparted at the little National School of Yoxford, but the only real teaching he got was at the night school in connection with the Peterborough Training College. He came to Peterborough in 1853, being then nearly fifteen years old. His first wages were 10s a week, his work being on the Great Eastern Railway. He started in the coal business, added a lamp and oil trade, and a tobacconist's business, extended his connection to Northampton, and prospered in a marked degree. Mr. Hunting has for many years been associated with public movements in Peterborough. For thirty years he served in the Volunteers, in every capacity from a private to a Captain. In 1877 he was elected on the Peterborough Town Council, which position has never since heen challenged. He has, therefore, sat under every Peterborough mayor. He is a member of the Peterborough Board of Guardians, County Council of the Soke of Peterborough, and Norman Cross Rural District Council, and chairman of the Fletton Parish Council. For many years he has held the offices of assessor and overseer of Fletton and Woodston.

ARMY VETERINARY DEPARTMENT.

Under a recent ruling, officers not doing duty with troops on board troopships have been compelled to pay full passage money for their wives and families when coming out to India on ordinary relief. This is particularly hard, writes the Lahore paper, on the Army Veterinary Department, whose officers of course have no actual duty to perform on board ship when coming out. They not only lose pay by serving in India, but now must either leave their wives at home for six years or pay £55 out, and a similar sum on the expiration of their tour, if they wish to bring them with them. As children have also to be paid for at P. and O. rates, the expense of an Indian tour to a man with a family will be extremely heavy. This is not likely to increase the popularity of service in India with the Army Veterinary Department.—*A. & N. Gazette.*

CORRESPONDENCE.

THE TEACHING OF ELEMENTARY VETERINARY SURGERY.

Sir,

The first letter written by your anonymous correspondent "Progressionist," would lead one to suppose that his statements therein were not to be regarded in a serious light, but were intended to play the part of a

burlesque on the subject in question. At least that was my impression on reading it, as it consisted of a tirade against students, teachers, examiners, and practitioners; the statements being contrary to what are known to be facts, and the manner and style of the entire production, proving the writer "to have drawn out the thread of his verbosity finer than the staple of his argument." Although the first letter does not merit criticism, the same cannot be said of his communication in *The Record* of Dec. 11th. In this we have definite statements made, which, if left unchallenged, might mislead readers other than those of the veterinary profession.

In the first place we are told that according to the ideas of this up-to-date surgeon (?) "he has not been satisfied that the students are compelled to carry out their elementary surgical work in a strictly surgical manner," and on reading further we find that they neglect "surgical cleanliness."

Now we have yet to learn that even in the most minor operations the field of operation is not cleansed, and the instruments and hands of the operator are not rendered aseptic. It matters not whether we carry out this procedure in a simple yet effectual manner, or whether we make a great display of the process.

Yet every practitioner, who is desirous of bringing his cases to a successful termination, carries out "surgical cleanliness" and every student learns this simple but important detail either when acting as a pupil, or at the college. To assert that he is not so taught is not correct, because we have ample evidence to prove that aseptic surgery is carried out as far as possible in all the teaching schools.

Perhaps more attention is devoted by the teaching schools of Great Britain to those operations which are necessary and useful for the future career of students, than is the case in continental schools. Certainly many of the operations described in translations of continental authors are not characterised by their utility for ordinary practice.

On the question as to whether perfect asepsis is possible in veterinary surgery, "Progressionist" has told us how to render the instruments, field of operation, dressings, etc., aseptic, but will he kindly inform us how to render the stable and surroundings aseptic? In human surgery, the patient can be placed under entirely different circumstances as regards ensuring perfect asepsis, both during the operation and the after treatment, suitable dressings can be applied and the air excluded from the wounds.

Common sense tells us that in veterinary surgery we have enormous difficulties to contend with as regards the large patients.

No doubt with the aid of concrete floors, good drainage, and proper ventilation, we can, as far as possible, render the infirmary for horses free from contaminating or septic matter, but we never can hope to approach the standard attained in this respect in human surgery. But to attempt to transform the ordinary stable into anything approaching the modern idea of aseptic surroundings would, in the majority of cases, remind one of Hercules and the Augean stables.

The "hair-splitting" with reference to drawing the boundary line between aseptic and anti-septic surgery, is of very little practical value, as the antiseptic system includes the principles of asepsis, (see Quain's Dictionary of Medicine.) Asepsis is defined in Gould's Medical Dictionary as "the condition of non-putrefaction, absence of all septic material, or pathogenic micro-organisms." While "aseptic" is defined by the same author as "free from contaminating or septic matter. The antiseptic treatment of wounds, including aseptic and antiseptic dressings, renders the wound aseptic."

Our experience teaches us that in the majority of our surgical cases, even under the most favourable conditions, it is advisable to use antiseptics; how much more so is this the case when we cannot properly protect the parts from the air or obtain suitable surroundings for the patients? It really matters very little what antiseptic agent we choose, provided the wounds are kept clean, and proper drainage is secured. And few will deny that proper drainage is the most important point in the treatment of wounds, without this, the most elaborate "toilet" and the most thorough attention to asepsis, will not avail—of course we are referring to deep wounds and to punctured wounds.

"Progressionist" admits that the horse is not so resistant to septic germs as other animals, hence, if his theory be correct there must be a large mortality in the equine species as the result of operations; because of all animals the horse is the one on which most surgical operations are performed. We do not hear of this alarming mortality, and we know that the majority of the cases that succumb, are those in which proper drainage of wounds cannot be secured, and in which we cannot obtain suitable surroundings for the patients.

"Progressionist" has opened up a new field for litigious clients; surely the responsibilities of practitioners were already sufficiently heavy, without rendering them liable for the occurrence of septicæmia following operations.

We believe in the use of boiling water for the thorough cleansing of instruments, and we all agree that the field of operation should be properly cleansed and washed with an antiseptic solution; but according to the first letter of "Progressionist." not being "made in Germany" we must be content to occupy an inferior position to our Continental brethren,—yours etc.,

E. Wallis Hoare.

Cork, Dec. 14th.

Dear Sir,

The last production emanating from the pen of "Progressionist"; in your issue of the 11th inst. is, I am happy to see, somewhat more moderate in tone: although he is still hopelessly confused, between aseptic surgery and antiseptic precautions. It is painfully evident that the only method of teaching "Progressionist," is that advocated by himself, as being the only successful one for students, namely the "parrot" method. There are however, certain statements in his letter that one cannot pass lightly over.

In the first place he reports me as stating, that aseptic surgery is "*impossible* in the treatment of the domesticated animals." What I say, is, that aseptic surgery in the treatment of the domesticated animals is "*But seldom possible*"; and this I maintain, for we can of course, always commence an operation in the proper aseptic manner, but we cannot always carry it out to a successful termination in this manner; especially is this the case in certain operations on the horse and ox: the difficulty of keeping the animals and the parts in a state of perfect rest, and the dressings undisturbed being very great: thus a wound in the process of healing may often become septic, when we are consequently obliged to fall back on antiseptic treatment.

Two other clauses call for notice in this second letter of "Progressionist."

In the first part of his letter he says, that he did not mention any particular school, student, etc. as he did not wish to be personal. Also, that he meant "to wake up the laggards," but at the time that he made those very insulting references to us, he most certainly did refer to the students *as a whole*.

The excuse for not giving his name, on the plea of being accused of advertising is distinctly ridiculous, for I do not think that even the bitterest opponent of advertising could possibly accuse "Progressionist" of that offence; I should say that it would be a most unenviable species of notoriety that it would obtain for him.

But, when he gives as a reason, for the non-forthcoming of proofs of his assertions, the fear of being had up for libellous statements, I think he can scarcely understand the meaning of the word "Libel"; for were "Progressionist" to prove his statements, there would then be no libel, for they would be true; but, when he makes statements of such a nature as those contained in his first letter, and then refuses to give proof, or to reveal his identity; I feel that nothing we can say or do is sufficiently strong to condemn such conduct.

In the Veterinary Surgeons' Act of 1881, in Clause 6, one reads that a name may be removed from the Register of Veterinary Surgeons, "When a person registered is shown to have been guilty of *any conduct* disgraceful to him in a professional respect."—Faithfully yours,

GERALD W. BLOXSOME.

[The publishing of defamatory matter is not actionable if such matter is *true*. But its publisher is still liable to a criminal prosecution unless he can show that the publishing of it in the manner in which it was published was for the public benefit at the time.]

RE "HALIFAX DOCKING FUND."

Dear Sir,

I reluctantly take up my pen to re-open the question of the above named fund.

It will be fresh in the memory of all that in the early part of the year about 3,000 circulars were issued to the members of the veterinary profession appealing for subscriptions for the specific purpose of relieving a brother practitioner in the time of trouble. I am led to believe the appeal was liberally responded to.

The circular issued distinctly stipulated "any surplus that may remain after providing for the expenses in the above case will be placed in the hands of a committee to form a permanent fund for assisting members of the profession who may be similarly placed to Mr. Appleyard, or which may, at the discretion of such committee, be handed over to the existing Veterinary Defence Society's Fund.

May I enquire if any such committee has ever been appointed, and if so is it not high time something definite was made known to the profession through the medium of *The Veterinary Record* as promised? It is now the middle of December, nine months ago since the appeal was made, and we are as much in the dark as ever respecting the amount subscribed and the manner in which it has been expended. Mr. Walker, no doubt, has some satisfactory explanation to give.

I may just mention the circular concluded by stating that subscriptions would be acknowledged in *The Veterinary Record*, and was signed by

P. M. Walker, M.R.C.V.S., Blackwall House, Halifax.
A. W. Briggs, M.R.C.V.S., Delph House, Halifax.

In a letter dated June 3rd, 1897, (over six months ago) signed by the above named gentlemen, the last paragraph read as follows: "We will in due course, according to promise, send to your paper a full list of subscriptions, and a balance sheet, showing how the money has been expended."

In another letter in *The Veterinary Record*, October 23rd, Mr. Walker replies to an enquiry of mine, dated October 10th, as follows: "A complete statement of accounts is only waiting the settlement of the expenses of one of the chief witnesses," this is eight weeks ago, and still we hear nothing further.

May I venture to ask the reason of this apparently unnecessary delay. I do strongly resent what seems to me the unbusinesslike way in which this matter has been carried out. I am driven to this feeling by the following facts: (*a*) by no official acknowledgment (as yet) of cheques received; (*b*) by no publication of the list of subscribers and the amount subscribed; (*c*) by no publication of expenditure or balance sheet; and (*d*) by no word of acknowledgment from Mr. Appleyard, on whose behalf the subscription was raised.

I am only afraid Mr. Editor it will be a sorry look out for the next deserving case that crops up in our midst, if the profession are again appealed to for help.

This apparent delay in acknowledgment of subscriptions and the presentation of a balance sheet is certain to make itself felt amongst us, and will doubtless act as a deterrent to many who would otherwise have given freely.

I fancy that members in future will be more chary in signing and forwarding cheques, though the case may be as fully deserving of our sympathy and assistance as the late "Appleyard Docking Case."—Faithfully yours,

JOSEPH H. CARTER, F.R.C.V.S.

VISIBLE SYMPTOMS IN GLANDERS.

Dear Sir,

In the discussion of the paper on "Glanders in Horses," published in your last issue I notice the question of how long a time elapses after infection before symptoms are shown, is touched upon by one of the speakers, who regarded it as a clinical point allowing room for difference of opinion.

Now that mallein has been so extensively used, careful records of tests must be in the hands of many. These if brought together or focussed would serve to dissipate the uncertainty, and show, within limits, the average period of so-called latency, during which symptoms are not observed—a very different thing from not being shown.

I can give one instance which appears to prove that a healthy animal may become infected and exhibit the plainest signs of the disease within a period of nine weeks and two days.

A bay mare, vanner, recently purchased from a clean source in the country was tested on June 10th, and gave negative results. She was re-tested on July 24th, and gave a positive re-action. On August 14th she had a chain of 10 farcy buds connected by corded lymph vessels along the off side of her chest, low down. She was killed on Aug. 15th, and numerous typical glander nodules found in each lung.—Yours truly,

H. G. ROGERS.

CLEANING HORSES BY MACHINERY.

Sir,

I notice in a recent issue an enquiry concerning "horse grooming" by machinery, and such improvements have been made in clipping by the introduction of the "Gillette" machine, the question induced me to call upon Messrs. Barton Bros., of 42 Gray's Inn Road, to whom we are indebted for the clipper. I was promptly informed that the firm has a new invention for the purpose of grooming only awaiting the full protection of the Patent Office before being placed upon the market. I understand it has proved very successful on the other side, which fact is fast becoming a guarantee of perfection.—I am, sir, yours

FRED. W. THOMPSON, M.R.C.V.S.

Queen's Rd., Reading

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. J. H. Parker, J. H. Carter, H. J. Dawes, F. W. Thompson, E. W. Hoare, J. R. R. Hamilton, J. E. Miller, T. Marriott, G.W. Bloxsome.

Devon and Exeter Gazette, *The Sussex Daily News*.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.